YELLOW-BREASTED CHAT
Icteria virens

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Management Status: Federal: None
California: Species of Special Concern (CDFG, 1998)

General Distribution:

The Yellow-breasted Chat breeds from southern British Columbia, southern Alberta, southern Saskatchewan, North Dakota, southern Minnesota (casually), southern Wisconsin, southern Michigan, southern Ontario, central New York, casually to southern Vermont and southern New Hampshire, south to south-central Baja California, on Pacific slope to northern Sinaloa, in the interior to Zacatecas, on Atlantic slope to southern Tamaulipas, and to the Gulf coast, and northern Florida. It winters from southern Baja California, southern Sinaloa, southern Texas, southern Louisiana, and southern Florida south through Middle America to western Panama (Dunn and Garrett, 1997; AOU, 1998). Chats are known to wander northward following breeding, at least in the eastern U.S. (Dennis, 1977; Harrison, 1984).

In California, Yellow-breasted Chats nest locally in riparian habitats the length of the state, including several widely-scattered desert locations. They are uncommonly observed in California during spring migration, and rarely observed during fall migration. There are only a few winter records for the west coast of California, and north to Oregon (Garrett and Dunn, 1981; Small, 1994).

Distribution in the West Mojave Planning Area:

In the WMPA, Yellow-breasted Chats nest or have nested at five localities: the Mojave River at Victorville (6-10 pairs annually; S. Myers unpubl. data), Camp Cady (2 pairs in 1985, Kaufman et al., 1986), Morongo Valley (2-7 pairs annually, E.A. Cardiff, pers. comm.; Breeding Bird Census data), Cushenbury Springs (1 pair, sporadically, S.J. Myers, pers. obs., R.L. McKernan, pers. comm.), and Afton Canyon (1 pair in 1977, Breeding Bird Census data). They also nest at South Fork Kern River Preserve near Weldon, just outside of the WMPA (between 50 and 100 pairs annually, S. Laymon, pers. comm.).

Yellow-breasted Chats are uncommon to rare migrants throughout the WMPA. They have not been reported during winter in the WMPA (K.L. Garrett, pers. comm.).

Natural History:

The Yellow-breasted Chat is the largest wood-warbler, and differs from other wood-warblers in behavior, vocalizations, and morphology. Authorities have questioned its taxonomic relationship to the other wood-warblers, but recent genetic work confirms its place in the family Parulidae (Sibley and Ahlquist, 1982). This species is characterized by its large size, bright yellow throat and breast, white belly, uniform olive-green upperparts, and distinct white "spectacles," which contrast with a black or gray loral area (Dunn and Garrett, 1997).

The Yellow-breasted Chat is 7-7.5 in. (17-19 cm) long, and weighs an average of approximately 0.9 oz (26 g). The western subspecies (*I. v. auricollis*) has a longer tail than the

eastern subspecies (*I. v. virens*), by an average of ¼ in. (6 mm) (Dunn and Garrett, 1997; Dennis, 1958; Dunning, 1984). The maximum recorded age of a wild Yellow-breasted Chat is 8 years, 11 months (Klimkiewicz et al., 1983).

The Yellow-breasted Chat's diet is comprised of insects, including beetles, bugs, ants, weevils, bees, wasps, mayflies, and caterpillars, and wild fruit such as elderberries, blackberries, and grapes. It forages for insects by gleaning foliage and branches (Bent, 1953; Ehrlich et al., 1988).

In southern California, the Yellow-breasted Chat usually arrives on its nesting grounds during mid-April (Dunn and Garrett, 1997). Little data are available on departure dates for southern California breeders, but it has been recorded as late as 29 September at Morongo Valley (C. McGaugh, unpubl. data).

Nests are coarse, bulky cups, about 5 in. (12.7 cm) across and 3 in. (7.6 cm) high, placed typically 3-6 ft. (0.9-1.8 m) high in dense thickets (Bent, 1953; Harrison, 1979; Dunn and Garrett, 1997). No data exist regarding plants used for nest placement at breeding localities in the California deserts, but chats' habits elsewhere suggest that California Wild Rose (*Rosa californica*), various shrubby willows (*Salix* spp.), Desert Grape (*Vitis girdiana*), and Mulefat (*Baccharis salicifolia*) may be used. Fremont Cottonwoods (*Populus fremontii*) and larger willows (*Salix* spp.) typically form the canopy at breeding sites such as Big Morongo Canyon, Cushenbury Springs, Camp Cady, and the Mojave River at Victorville.

Yellow-breasted Chats lay clutches of 3-6 eggs, most commonly 4-5. They are single-brooded (Bent, 1953; Harrison, 1979; Kaufman, 1996). Incubation, performed by the female, takes 11-12 days (Baicich and Harrison, 1997). Yellow-breasted Chats are frequent hosts for parasitism by Brown-headed Cowbirds *(Molothrus ater*). Friedmann (1963) reports that rates of parasitism and chats' responses to it vary locally. Gaines (1974) considered the Yellow-breasted Chat's susceptibility to parasitism in the Sacramento Valley to be moderate. Along the Colorado River in Grand Canyon National Park, Brown (1994) reported a parasitism rate of 11%.

Habitat Requirements:

Yellow-breasted Chats occur in a wide variety of habitats across the U.S., including thickets and brambles of willows and thorny vegetation at the edges of deciduous forests in the east, and mesquite in the southwest (Phillips et al., 1964; Dunn and Garrett, 1997).

In the southwestern deserts, Yellow-breasted Chats occur in riparian woodland, forest, and scrub dominated by cottonwoods, willows, Arrow Weed (*Pluchea sericea*), Salt-cedar (*Tamarix* spp.), and Mulefat (Hunter et al., 1988; Brown and Trosset, 1989; Dunn and Garrett, 1997) . All breeding in the WMPA occurs in riparian habitats dominated by cottonwoods and willows. Nesting habitat must have dense understory vegetation and larger trees that are used for singing perches (Dunn and Garrett, 1997). No data exist regarding territory sizes in California, but various studies in the midwest and east reported territories averaging 0.3-3.1 acres (0.12-1.3 ha) (Thompson and Nolan, 1973; Zeiner et al., 1990).

Population Status:

Yellow-breasted Chat populations in the eastern U.S. have declined significantly in recent times. Western populations are generally stable, but some local declines have occurred in California as a result of urbanization, flood control activities, and perhaps cowbird parasitism (Dunn and Garrett, 1997). A serious decline has occurred along the Colorado River (Remsen,

1978; Hunter, 1984; Rosenberg et al., 1991). This species appears to be stable at Morongo Valley. Numbers along the Mojave River at Victorville have generally increased since 1987, but some fluctuation has occurred due to flood control activity (S.J. Myers, pers. obs.). It is likely that the Mojave River, prior to the lowering of its groundwater, formerly supported more chats than it now does, but data supporting this view are limited. Yellow-breasted Chats formerly nested at Yermo (Lamb, 1912); there is little or no suitable habitat there now. It is unknown whether the species still nests at Afton Canyon or Camp Cady.

Threats Analysis:

Habitat destruction and parasitism by Brown-headed Cowbirds are the primary threats to breeding Yellow-breasted Chats in the WMPA. Habitat destruction and degradation occurs in many ways, with the most catastrophic losses resulting from clearing of large tracts of forest or woodland for agriculture, development, or flood control. In southern California, Yellow-breasted Chats rely heavily on early seral stage willows for nesting, so flood control maintenance involving the removal of vegetation along active river channels can destroy habitat, at least temporarily.

Grazing by cattle or other livestock can have significant adverse effects on riparian habitats (Sedgwick and Knopf, 1987). In addition to eating seedlings, saplings, shrubs, and herbaceous plants, livestock tramples vegetation and the substrates of riparian areas, causing increased erosion and sedimentation. These adverse effects lead to a reduction in cover and nesting sites for birds, along with declines in available insect prey (USDI, 1981; Crumpacker, 1984). Smith (1988), studying the recovery of a riparian habitat in northern California following the exclusion of cattle, concluded that the establishment of good quality willow riparian habitat is possible only in the absence of cattle browsing.

Brown-headed Cowbird parasitism on Yellow-breasted Chats may be a problem in southern California (Garrett and Dunn, 1981; Dunn and Garrett, 1997). Brown-headed Cowbirds are common in Morongo Valley and along the Mojave River during the nesting season. Both of these areas are commonly used for horseback riding; stables, which provide feeding areas for cowbirds (Laymon, 1987), are located near riparian habitats in these areas. At Mojave Narrows Regional Park, equestrians have created an extensive network of trails through the riparian forest and woodland, increasing the amount of "edge," which is known to be a favorable condition for the proliferation of Brown-headed Cowbirds (Brittingham and Temple, 1983).

Lowering of ground water has had a significant effect on cottonwood-willow forest along the Mojave River in Victorville. The extent of both marshland and riparian woodland/forest has declined markedly in the past 140 years, primarily due to the drilling of wells in the Victor Valley (Torres et al., 1992). Long-time residents have stated that much of the open, dry cottonwood woodland (with little understory) in the area was once more similar to the dense, lush cottonwood-willow forest where Yellow-breasted Chats now occur (Myers, 1992).

Fire can have a negative, though perhaps short-term effect on Yellow-breasted Chat nesting habitat in the California desert. A wildfire at Big Morongo Preserve on 27 April 1992 burned about 50 acres (20 ha), including many large cottonwoods and willows (Cardiff, 1993), but the Yellow-breasted Chat was among those species which had recovered to pre-burn numbers by 1995 (Cardiff, 1996). Nesting was unsuccessful in the burned area the year of the fire. Non-native, invasive plants can also degrade habitat. Exotics such as Salt Cedar (*Tamarix ramosissima, T. parviflora*), Giant Reed (*Arundo donax*), and Russian Olive (*Elaeagnus angustifolius*) displace native plant species and provide little or no habitat value for riparian-

obligate birds such as Yellow-breasted Chats (Anderson et al., 1989). All of these invasive species occur along the Mojave River in the Victorville area; Russian Olive is especially prominent. Salt cedar is common at Camp Cady and Afton Canyon; some occurs at Morongo Valley.

Few, if any, data are available on the effects of off-highway vehicles on Yellow-breasted Chats, but this activity is common at Mojave Narrows Park and other potential nesting areas along the Mojave River. Weinstein (1978), studying effects of off-road vehicles on birds at Afton Canyon, found that many birds abandoned areas while vehicles were using them. Additionally, birds flushed from these areas were probably more susceptible to predation due to being forced to areas containing less cover. Four-wheel drive pickup trucks have been observed crashing through dense willow thickets along the active channel of the river (S. Myers, pers. obs.).

Biological Standards:

The goal of management activities for the Yellow-breasted Chat in the WMPA is the preservation and enhancement of known and potential nesting areas. Of the known nesting localities, Big Morongo Canyon Preserve and Afton Canyon are managed by BLM. Mojave Narrows Regional Park is managed by San Bernardino County Regional Parks Department (the land is owned by the State of California Wildlife Conservation Board). Camp Cady is a Department of Fish and Game Wildlife Area. Cushenbury Springs is owned by Mitsubishi Cement Company.

Livestock and feral burros should be excluded from riparian areas in the WMPA. This may require the installation of fencing designed to accommodate native wildlife (e.g., Coyotes, Kit Foxes, Bobcats), but exclude livestock and burros. It may be necessary to install stock tanks in some locations to compensate for the loss of water sources for livestock. Areas whose avifaunas may benefit from livestock exclusion include Camp Cady, Afton Canyon, and Cushenbury Springs. At Mojave Narrows Regional Park, grazing is currently limited to pastures adjacent to the river bottom and the Lower Slough. Cattle and horses are allowed to graze throughout the slough, which contains a 30 acre marsh with mixed riparian scrub and woodland suitable for Yellow-breasted Chats. A fence restricting livestock to the pastures in this area would greatly enhance the marsh and riparian habitat.

Brown-headed Cowbird control at important riparian bird nesting sites in the WMPA may benefit breeding Yellow-breasted Chats. Cowbird control programs must be long-term. In order to initiate cowbird control at all important nesting sites in the WMPA, it may be necessary for agencies at federal, state, county, and local levels to participate in cooperative plans.

Management of important nesting areas for Yellow-breasted Chats must include protection from off-highway vehicle degradation and disturbance, wood-cutting, and wildfires. Removal of vegetation for flood control purposes should be regulated with consideration given to biological resources. Typically, the vegetation removed during or in anticipation of flooding (such as along the Mojave River) is that used by nesting Yellow-breasted Chats, Yellow Warblers (*Dendroica petechia*), and endangered species such as Least Bell's Vireo (*Vireo bellii pusillus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*; S.J. Myers, pers. obs.).

Maintenance or enhancement of water sources necessary to preserve or improve riparian habitats should be a management consideration. In some cases, as in Afton Canyon, restoration of riparian habitat by removing invasives and planting cottonwoods and willows may be appropriate.

In order to evaluate the vigor of desert riparian habitats and the viability of bird populations in the WMPA, regular monitoring is necessary. BLM documents such as ACEC Management Plans and Management Plans for Natural Areas prescribe bird monitoring programs. BLM and other participating agencies should assess the effectiveness of current monitoring methods and revise as needed. Annual review of monitoring results can be used to assist in management decisions. Such review should address whether habitats are at carrying capacity for sensitive bird species, and if not, identify corrective measures that can be taken to increase populations.

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